

A1 Organs, cells, tissues

- Every living thing is made up of tiny units called *cells*.
A *tissue* is made up of lots of the same kind of cell.
An *organ* is made up of different tissues. These tissues work together to do a job.
- a** heart **b** muscle **c** leaf
d nerve **e** stomach **f** roots
- a** Organs coloured red – leaf, heart, roots, stomach.
b Tissues coloured blue – muscle tissue, outer skin tissue.
c Cells coloured yellow – skin cell, plant cell.

A2 Building blocks

- Animal cell labels, top to bottom – cell membrane, nucleus, cytoplasm.
Plant cell labels, clockwise from top left – nucleus, cell wall, cell membrane, chloroplasts, cytoplasm, vacuole.
- a** nucleus, cytoplasm, cell membrane – in any order.
b cell wall, chloroplasts, vacuole – in any order.
- cell membrane – This surrounds the cell. It lets things move in and out of the cell.
nucleus – This controls everything that happens inside the cell.
cell wall – A tough wall around plants cells. It supports the cell.
vacuole – A space filled with a liquid. It is only found in plant cells.
cytoplasm – A liquid where chemical changes happen.
chloroplasts – Packets of green colour which help the plant make food.

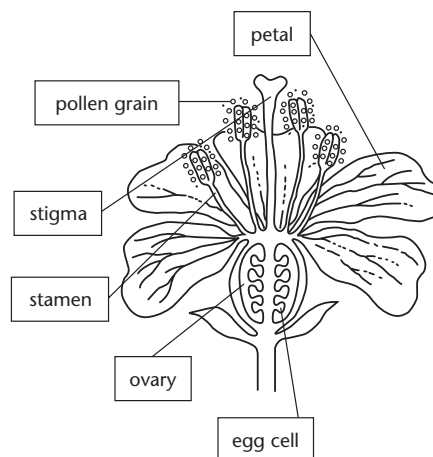
A3 Cells and growth

- grow, bigger, divide, two, smaller
- a** 1 **b** 2 **c** 4 **d** 8 **e** 3
f The cells in B are smaller than in C or the cells in C are bigger than in B.
- Correct order – A plant cell. The nucleus starts to divide. The nucleus has divided. A new cell starts to form. Two new plant cells.

A4 Scaling up and down

- a** Measurements from top to bottom – 2.7 cm or 27 mm, 1.5 cm or 15 mm, 3 cm or 30 mm, 1.7 cm or 17 mm, 2 cm or 20 mm, 1.8 cm or 18 mm.
b car, cornflakes
c plant cell, fly
d sugar cube, postage stamp
- a** D
b A

A5 Flower cells



- petal – Attracts insects to the plant to take the pollen to another flower.
 pollen grain – The male sex cell.
 stigma – The male sex cells from a different plant stick to this to pollinate it.
 stamen – Makes the male sex cells.
 ovary – Makes the female sex cells.
 egg cell – The female sex cell.
- fertilisation – When a male sex cell joins with a female sex cell to make a new life.
 pollination – When pollen lands on the stigma.
 pollen grain – The male sex cell in a flower.
 egg cell – The female sex cell in a flower.
 reproduction – What living things do to make more of themselves.
- 1 – The bee lands on a flower. Pollen from the stamen sticks to it.
 2 – The bee flies to another flower carrying the pollen with it.
 3 – Pollen from the bee sticks to the stigma.
 4 – A tube grows from the pollen grain to the ovary. The nucleus moves down it and fertilises an egg cell. This turns into a seed.